

Amendments to the Drawings:

The attached drawing (1 page) includes a change to Figure 7, adding reference number 127B to designate the neck portion of collar 127. No amendments have been made to the other Figures in this application. This amendment adds an identifying reference number to an item already in the drawing and adds no new matter.

REMARKS

Claims 7, 9-11, and 13-21 are pending. Claims 10, 11 and 21 have been amended. Basis for the amendments can be found in the specification: (for recitation of container comprising a plastic material) at page 12, lines 18-20, (for the recitation of a container that can be extended from a collapsed condition and filled with the filter and cage in place) at page 9, lines 17-23, page 19, lines 16-21, page 21, lines 4-8, and Fig. 3, and (for the recitation of the neck portion of the collar) in Replacement Figure 7 and Figure 4. Entry of the amendments and reconsideration of the application are requested.

The liquid supply assemblies and combination of spray gun and a liquid supply assembly claimed in this application include a combination of a collapsible container having a filler opening in its lid and a filter having a tubular body integral with a collar that fits in the filler opening, the collar being connected to a cage surrounding the filter body. The filter is sufficiently rigid to maintain an elongate, tubular shape, and the filter and cage are sufficiently flexible to allow them both to collapse along the whole length of the filter as the container side wall collapses. These inventive articles allow one to filter liquid (paint) being added to the collapsible container without removing the lid from the container and without detaching the spray gun.

The Examiner courteously granted a telephone interview which was held on June 23, 2010 with the Examiner, the inventor, and the undersigned attorney present. Possible claim amendments and certain substantive parts of the Office Action were discussed. The remarks which follow reflect the discussion in the interview and are intended to fulfill the requirement for a written statement under MPEP 713.04.

Claims 7, 9-11 and 13-21 have been rejected under 35 USC § 103(a) as obvious over Joseph WO 02/085533 A1, Joseph WO 98/32539 in view of Lutz U.S. 2002/0148763. This rejection has been avoided by the claim amendments.

There are substantial differences between the references and the claims as amended. In order to arrive at the combinations in independent claims 10, 11 and 21 it would be necessary to modify the cited combination of references as follows:

1. Add to the filter of Joseph WO02 a support collar, having a lip portion and a neck portion, that fits in the filler opening so that the filter body extends away from the opening.

Office Action page 3 says that Joseph WO98 teaches a filter with a collar 38 integral with the body. Joseph WO98 (page 14) describes item 38 as a rim, not a collar and says that rim 38 lies on top of the liner rim 36 and is held in place by cap 8. As noted in the interview, the rim of Joseph WO98 is not the same as the collar of the present claims. The present collar must fit in the filler opening so that the filter body extends away from the opening. The collar of the present application as shown in Figures 4, 6 and 7 performs that function, but the rim of Joseph WO98 does not. There is no need for it to do so because the filter in Joseph WO98 is nearly congruent with the liner 35. There is no need for the filter of Joseph WO98 to be held so that it extends away from a filler opening, since it fits against the liner, and the filler opening is the open top of liner 35 rather than a separate opening in the lid.

Amended claims 10, 11 and 21 require that the support collar have a lip portion and a neck portion, as shown in the drawings. As discussed in the interview, the neck part of the collar shown in Fig. 7 of the application further distinguishes the present invention from Joseph WO98.

2. Make the filter and cage sufficiently flexible to allow them to collapse along the length of the filter as the container collapses, and make the container so that it can be extended from a collapsed condition and filled with the filter and cage in place. The underlined part of the previous sentence has been added to the independent claims as a result of the discussion in the interview to further distinguish the claims over the references, notably Lutz.

Office action page 4 says that the limitation to flexibility and collapsibility is considered a recitation of intended use which, “must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In this case, the filter and cage disclosed by Lutz is sufficiently flexible and capable of allowing the filter and cage to collapse along the whole length of the filter as the container side wall collapses.”

During the interview, the Examiner referred to the recitation of flexibility in Lutz paragraph [0098]. The inventor and the undersigned noted that flexibility in the context of Lutz is quite different from flexibility in the context of the present claims. The present claims are to articles useful in hand-held spraying apparatus; while, Lutz relates to a screen cylinder apparatus

used in pulp processing in the paper industry. Lutz teaches making his perforate screen media from wedge wire [0010], [0026], [0027], [0036], [0037] that is normally stiff and not intended to collapse. His frame has a sidewall of a solid material, such as sheet metal, cast or molded metal, e.g., $\frac{1}{4}$ inch thick sheet metal ([0011], [0090]-[0100]) which would not readily collapse. Lutz's screening apparatus 60 has an internal rotor 76 (Figs. 1 and 17, and [0085] and [0138]) having foil 118 at the end of rotor arms 77 and 79, the foil being adjacent screen media 66. The rotor is rotated to improve flow through the media, [0138] and [0149]. It would be impossible for screen cylinder 66 and frame 68 of Lutz to perform the function required in the rejected claims.

Lutz teaches preventing his screen media 66 from flexing by using a structure that supports it ([0010], [0011], [0128], [0140], [0145] and [149]). Lutz is directed at alleviating problems in prior art screen cylinders used in the pulp and paper art, one of which was undesired deflection and stressing of the screen, [0005] and [0149]. Advantages Lutz states for his invention are a more uniform gap 116 between rotor foil 118 and the screen and a true (not flexible) frame [0097]. Lutz teaches away from a collapsible structure.

Although Lutz mentions flexibility, it is in the context of his frame 68 being flexible as a centrifugally cast metal component of his pulp screening apparatus which is not the same as the flexibility of the filter and cage of the present claims that is sufficient to allow them to collapse along the length of the filter as the container in which they reside collapses. The claims have been amended to require that the container be made of plastic to emphasize this point further.

Lutz's apparatus is not intended to collapse in use, but the Examiner said in the interview that it was capable of collapsing. It is believed that this position is untenable as a practical matter, since collapse of Lutz's apparatus would not be contemplated by anyone skilled in the art in view of the points made above, and the issue is one of Lutz's disclosure making it obvious to add missing elements to the disclosures of Joseph WO98 and WO02. The claimed combination of filter and cage that are flexible and can collapse with the container in which they reside is a structural difference over Lutz.

During the interview, the examiner recognized that the container of the present claims could regain its shape (albeit not exactly, since it would be wrinkled) after collapsing; whereas, Lutz's apparatus would not. She used the term "resilient" to characterize this property and indicated that it is a difference between Lutz and the articles of the present invention. The

claims have been amended to require that the container can be extended from a collapsed condition and filled with the filter and cage in place. This addition to the claims further distinguishes them structurally from the combination of Lutz with Joseph WO02 and WO98.

3. As to claim 15, it would be further necessary to orient the filter tubular body at an angle not parallel to the side wall of the container. Office action page 6, says, “Joseph WO02 discloses wherein the tubular body of the filter is oriented at an angle that is not parallel to the side wall of the container 309 as shown in Fig. 24.” This assertion is traversed, and the Examiner is requested to withdraw it. Joseph WO02 Fig.24 is in the series Figs. 21–24 and shows the paint reservoir connected to a spray gun, and opening 330 appears to have an axis approximately parallel to the side wall of container 309. There is no showing in the references of a filter tubular body oriented at an angle not parallel to the side wall of the container containing it. The angled orientation of claim 15 facilitates filling the container of the claimed liquid supply assembly without having to detach the spray gun (specification page 14, lines 12-15 and page 19, first full paragraph).

4. As to claim 21, it would be necessary to add the feature that the cage is integral with the filter mesh body, which is not found in any of the references. Basis for claim 21 is in the specification at page 6, lines 31-32. This feature of the invention can be made by, for example, molding the cage with the mesh body so that it is part of the mesh body. There is no teaching of an integral cage/filter combination in the cited references. Lutz’s screen and frame are explicitly releasably engaged [0010] and are thus not integral.

The modifications recited above are too numerous and too substantial to have been obvious to one of ordinary skill. Hindsight, with the advantage of knowing the present inventor’s disclosure would have been required in order to make such modifications. The claimed articles represent a unique way to filter liquid being added to the collapsible container of a liquid supply assembly having the advantages pointed out on page 8 above. Although Joseph WO02 discloses a drop-in, sock filter in conjunction with filler opening 330, it does not disclose

the claim features enumerated above, and the Joseph WO98 and Lutz references do not make them obvious for the reasons discussed.

In view of the above, claims 7, 9-11, and 13-21, as amended, are in condition for allowance. Withdrawal of the rejection under 35 U.S.C. §103(a) and a notification of allowability are respectfully requested. If any questions or issues remain, the resolution of which the Examiner feels would be advanced by a conference with applicant's attorney, she is invited to contact such attorney at the telephone number noted below.

Respectfully submitted,

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Date

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